record (The New York Medical Journal, March 2, 1920) five cases of pre-adolescent hypopituitarism, in three of whom no prostate could be felt by rectal examination, and in two of whom only a very tiny diminutive organ could be recognized.

Since that publication several more cases have been discovered so that to date there may be reported *fifteen cases of hypopituitarism* (eight of the Lorain type, five of the Froelich syndrome and two of the Neurath-Cushing type) *and three cases of primary gonad deficiency.* Of the eighteen cases *no prostate could be felt in thirteen cases and only a tiny diminutive organ in the remaining five.*

The prostate is large enough normally in childhood to be easily felt and pediatricians especially are urged to make rectal examination in boys who show other stigmata of infantilism.

Not much is to be gained at this time by elaborating theories concerning absent or diminutive prostate in hypopituitarism. It is established that atrophy occurs after castration; we also know that testicular aplasia occurs in hypopituitarism. *Whether the prostatic aplasia or atrophy in hypopituitarism is due directly to the lack of pituitary secretion or whether it follows upon testicular insufficiency is difficult to decide. As it happens, all the cases that show absent or diminutive prostates likewise show tiny and insufficient testes.*

The above data summarizes briefly a paper to be published shortly which will discuss the question more fully and which will include detailed histories of the eighteen cases together with their photographs.

"The Great Question"—We hospital administrators live in the midst of a mass of questions. They rise and confront us on every hand. They grow up like thistles in the field—questions social, economic, financial, nursing, medical, industrial and international. We walk in a forest of them, some tall as trees and seemingly as big in girth, while others form a jungle of little irritating problems that catch at us and tear us as we try to make our way. Everybody seems so busy asking questions that nobody seems to have time to answer them. One favorite way of trying to answer them is to send out a questionnaire; as if we had moved forward toward the answer to one question by raising forty more. Never mind whether anyone answers or not; send out the question, then feel that we have done something. The sign of the times seems to be a huge question mark.—From the Presidential Address of George D. O'Hanlon, read before the Twenty-fourth Annual Convention of the American Hospital Association, published in The Modern Hospital.

Drifting or Rowing—You are either drifting downstream with the tide and the dead ones, or you are pulling for all you are worth against the current of events. You cannot anchor, for life is one continuous voyage. You are either reading, studying, working, or you are fooling away your most valuable asset—time. If you are trying to improve yourself you are going ahead. If your brain is full of nonsense, you can bet your boots you are drifting down the stream.—The Silent Partner.

SOME OUTSTANDING FEATURES OF RECENT PROGRESS IN SURGERY*

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It is, of course, quite impossible within the limits of our allotted time to even touch upon all the phases of recent advances in surgical practice. We must content ourselves with briefly citing the outstanding features of our subject.

Biliary Surgery—One of the most important advances in biliary surgery has been in connection with the pre-operative and post-operative care of jaundiced patients. As it is well known one of the chief risks of operating in the presence of jaundice is the post-operative bleeding, not by reason of the slipping of a ligature from a vessel, but from the multiple points on abraded surfaces, due to diminished coagulability of the blood. Most of the fatalities due to intro-abdominal hemorrhage in jaundiced patients are in cases where the coagulating time of the blood is nine minutes or more. It has been found that calcium chloride in 10 per cent solution, 5 cc., injected intravenously during a three or four-day period will greatly reduce the coagulating time of the blood.

In addition these jaundiced patients should be fed large quantities of carbo-hydrates and given 15 per cent glucose in tap water by proctoclysis and 3000 or 4000 cc. of water by mouth every twenty-four hours, to hydrate the patient and to promote elimination of the toxic bile pigments.

Opie, as the result of his experimental work, believes that carbo-hydrates prevent disintegration of body proteins when the individual is in a state of toxemia. It is believed that the calcium is beneficial, not only in lowering the coagulating time of the blood, but in decreasing toxemia by uniting with the circulating bile pigment. In addition to this Crile recommends an extremely light form of nitrous oxide anesthesia, the avoidance of any narcotic, especially morphin. Hot packs to the liver continued intermittently after the operation until convalescence is established, one or more transfusions of blood during the first week, and in gravest cases, if possible, dividing the operation into two stages, are further protective features for the jaundiced patient. Recently a personal case, a man extremely ill and heavily jaundiced, was treated by the calcium method and the blood coagulating time was reduced from more than nine minutes to seven minutes within two or three days, and largely under local anesthesia a cholecystgastrostomy was successfully performed.

In the development of biliary surgery there is an outstanding feature now quite generally accepted by common consent, namely, that it is extremely unwise and injudicious to perform in one stage an operation involving interference with the pelvic organs and the gall-bladder. Experience has been a very effective teacher in this respect. It is not a question of speed or dexterity on the part of the surgeon, for the fatalities occur in this class of cases, for instance, hysterectomy and cholecystectomy combined, where

* Read before the General Session of the Medical Society of California at Yosemite National Park, May 17, 1922.

the lapse of time has been remarkably short. Practically all surgeons of any considerable experience now do a two-stage operation where gall-bladder involvement is determined in connection with pelvic pathology. The striking statement of the late John B. Murphy, although referring to a different surgical procedure, is most applicable to the man who persists in going the limit in a one-stage operation: "It is complimentary to his daring, but derogatory of his judgment and hazardous to his patient in the extreme."

Interesting and helpful features are developing as to the possible and probable causes of gall-stones. Rosenow's studies have persuaded him that gall-stones result from cholecystitis, being caused by bacterial invasion of the gall-bladder wall. Henes thinks hypercholesterenemia the primary and fundamental etiological factor in the production of gall-stones. Certain it is that many gall-bladders with cholesterin stones give no evidence of infection. Aoyama, producing gall-stones by subcutaneous and oral feeding of cholesterin, has given support to Henes' contention. Rothschild and Felson noted very high cholesterenemia in obstructive jaundice *due to stone,* while in jaundice due to hepatic lesion the cholesterin content was normal or subnormal. Certainly these observations strongly suggest that the routine examination of the percentage of cholesterin in the blood might be a valuable diagnostic feature in biliary conditions. Next to the appendix, the gall-bladder furnishes the most frequent intra-abdominal lesion requiring surgical interference, consequently progress in the direction of earlier and more accurate recognition of gall-bladder involvement has been most marked. During all the developmental period of biliary surgery there has been considerable swinging of the pendulum of opinion as between cholecystostomy and cholecystectomy; also as to whether the dissection should begin at the fundus or at the ducts; again as to whether or not the duct and artery should be ligated separately, and as to whether or not drainage should be routinely used following cholecystectomy.

There is great diversity of opinion as to the function of the gall-bladder, but probably it is principally a concentrator of the bile. Thus far the removal of the gall-bladder has apparently not been followed by any particularly demonstrable deleterious effect upon the body beyond a dilatation of the extra-hepatic ducts. Sufficient time has now elapsed to permit of the conclusion that the end results of cholecystectomy are sufficiently better than cholecystostomy to justify the more radical operation except in special cases where distinctly contra-indicated.

The opinion seems to be gaining ground that more frequently than formerly supposed there is variation in the relation and termination of the hepatic and cystic ducts and that isolation of the ducts and more accurate determination of their relationship may be obtained in dissecting the gall-bladder from the fundus toward the ducts. Isolation of the cystic duct and its separate ligation is a factor of safety against injury of either the hepatic or the common duct. But aside from this there seems to be no particular advantage in the separate ligation of the duct and artery. Judd expressed to me his personal opinion that it did not make the slightest difference.

Undoubtedly the tendency is strongly toward closing without drainage following cholecystectomy; but this practice involves the necessity for very thorough hemostasis, careful peritonization to prevent leakage of bile from the abraded liver surface, and thorough securing of the stump of the cystic duct by the ligature to prevent its reopening. There are still many good men, however, who are earnestly pleading that drainage be provided for a few days following cholecystectomy.

There has been great advance in the matter of plastic and repairative work on the bile ducts in the use of pedicled flaps of bowel or stomach or, better still, by the reimplantation of the duct either into the stomach or duodenum.

Gastric Surgery—Since 1881, when Billroth did the first successful pylorectomy and Wolfler the first gastro-enterostomy, gastric surgery has passed through the era of almost utter abandonment, due to disappointing results and excessive mortality, to that of perfected mechanical facilities, highly developed technique and diagnostic acumen, bringing gastric surgery to the point of brilliant achievements equal to that of any phase of surgical endeavor. The period of disappointing results from ill-advised gastro-enterostomies led to a more careful differentiation of cases and to more specific classification of indications for this procedure until it now rests upon a much less questionable basis than in the days of its much more frequent abuse. Moynihan believes that 90 per cent of the unfavorable results of gastro-enterostomies can be accounted for on the basis of the operation being done without organic lesion, that is, for functional disorders or for chronic diseases elsewhere than in the stomach.

Most of the discussion in gastric surgery now chiefly involves the question of the proper surgical treatment of gastric and duodenal ulcer, whether ordinary gastro-enterostomy is sufficient for single pyloric and duodenal ulcers or whether circular excision of the ulcer with gastro-enterostomy should be adopted. Deaver believes if the ulcer is allowed to remain it may or may not heal, and his experience has led him to resect the ulcer in addition to doing a gastro-enterostomy, thus reducing the chance of carcinoma and of subsequent hemorrhage or perforation. In Bull's clinic in Christiania, simple gastro-enterostomy has seemed to give as good results as resection in ulcers *near* the pylorus and in the duodenum, but far less satisfactory results are obtained from gastro-enterostomy when the ulcers are at a distance from the pylorus. Judd believes that for ulcer in the cardiac end of the stomach it is better to do a gastro-enterostomy in addition to excision because at least one-third of these patients have recurrence of symptoms where mere excision without gastro-enterostomy is done. He believes the rhythm is broken when certain portions of muscle are removed, causing two waves to come together so that the stomach does not properly empty. When gastro-enterostomy is done and the ulcer not excised, 65 per cent recover and in 35 per cent symptoms will recur. Judd believes

gastro-enterostomy without excision is the procedure of choice for duodenal ulcer. Curt Methling of Leipsic observes that for ulcer of the stomach or duodenum near the pylorus simple gastro-enterostomy gives a very satisfactory immediate result, but that after a few months there is a sense of pressure, more or less hypo-chlorhydria, anacidity and chronic gastritis, just as unpleasant in its phenomena as the original ulcer. The bile flowing through the anastomotic opening, combining with the acid, controls the hyper-chlorhydria for the time, but later the effect of the bile in the stomach is to injure the secretory activity of the gastric glands and to eventually produce a chronic anacidity with gastritis.

It seems probable that an entero anastomosis, short circuiting the proximal and distal jejunum three to four inches from the gastro-enterostomy will overcome this interference of the admixture of bile with the stomach contents. This entero anastomosis can be very quickly and easily done with a small Murphy button, the two halves of the button being dropped into the proximal and distal jejunum when the bowel is opened for the gastro-enterostomy.

With the relative frequency of carcinoma being superficial upon an old ulcer one can not escape the conviction that wherever possible all gastric ulcers should be excised. It is equally true regarding the danger of subsequent perforation. Nathan Winslow recently reported twenty-nine cases of perforated gastric and duodenal ulcer which were operated. Fourteen recovered and fifteen died. Twenty-three of the twenty-nine cases gave histories of gastric disturbance typical of ulcer, for which had proper treatment been instituted the emergency operation with high mortality might have been avoided. Progress in the surgical treatment of gastric carcinoma has been very gratifying. Results showing at least 25 to 30 per cent of three to five-year cures. It is now believed that in fifty per cent of gastric carcinomas there is no metastasis, consequently a much larger percentage of these cases lend themselves to favorable surgical interference than was formerly supposed.

Experience has seemed to demonstrate that the Billroth II and the Mayo modification of the anterior and posterior Polya operations give the best results in partial resections of the stomach. With the regular posterior Polya I believe there is much greater danger of back pressure causing a reopening of the blind duodenal stump, possibly through too complete incorporation of the jejunum with the heavier gastric walls, producing more or less obstruction. I have twice had the experience of duodenal leakage after performing the posterior Polya. Where sufficient stomach is left so that it can be brought through the opening in the transverse meso-colon it seems the modified Polya is the best type of gastric resection; but where it is necessary to remove more than one-third or one-half of the stomach the modified anterior Polya is decidedly the best. The emptying of the stomach along the lesser curvature into the distal jejunum, through a small opening, the overlapping of the sutured stomach by the jejunal walls and the saving of time made possible by this technique makes of this operation an exceedingly gratifying gastric operative procedure.

Babcock joins the duodenum to the lesser curvature of the resected stomach and overlaps the sutured portion of the stomach with the duodenal walls and thus avoids the "Fatal Angle" and re-establishes a normal relationship between the stomach and duodenum.

Thoracic Surgery—From among the remarkable developments in thoracic surgery during recent years we can only mention one or two.

Empyema—The great epidemics of 1917 and 1918 afforded unparalleled opportunity for observation and study of the empyema problem. At first early operation was resorted to, that is, while the pneumonia was active, and the mortality was frightful, running as high as 60 per cent. With the change in this feature and by adopting the policy of operating early so far as the empyema was concerned, but late so far as the pneumonia was concerned the mortality was reduced to about 5 or 7 per cent.

Only one other recent advance in chest surgery will be mentioned, and that is Jacobaeus thoracoscopic examination of the chest through a pneumothorax and direct cauterization of the old adhesions, thus permitting of collapse of the lung in tubercular and empyemic conditions. At the recent meeting of the American College of Surgeons, Jacobaeus reported seventy-eight cases of intrathoracic adhesions treated by his method, in fifty-five of which the adhesions were successfully removed and in which 63 per cent of the cases showed pus and sputum rapidly disappearing and the patient becoming symptom free. He further reports several cases of intra-thoracic tumor having been diagnosed by the thoracoscope and afterwards successfully removed by surgical interference.

The Thyroid—Perhaps no other field of surgical endeavor has been more fruitful in recent years than that of surgery of the thyroid. It is now possible to hold out to this class of patients most brilliant prospects of complete recovery, no matter from what type of pathologic thyroid they may be suffering. Radium emanations, protecting the heart with digitalis and hydrotherapy, blood transfusions, open wound for the first twenty-four hours for rapid drainage and metabolic studies, have developed additional factors of safety in thyroid surgery.

Acidosis—The development of the theory of acidosis and its importance in estimated degree of surgical risk is now regarded as of immense value as an adjunct in surgical practice. The incident of acute acidosis during operation is 14 per cent and is more frequent in women than in men. Glucose and soda bicarbonate, administered intravenously during operation, both intravenously and by bowel following operation, together with carbohydrate feeding before and after operation, will entirely prevent or lessen the incident of acidosis. Time forbids any attempt to discuss many other splendid illustrations of wonderful surgical advancement in recent years. Blood transfusion has proven of such inestimable value and its field of usefulness is rapidly broadening. Crile gives transfusions in infections of all kinds. One patient reported was

given 2600 cc. of blood in six hours. In streptococcus hemolyticus in his clinic, recoveries have increased 50 per cent by transfusion. Good results have been obtained in lateral sinus thrombosis and in severe types of exophthalmic goitre.

In conclusion, we remark that undoubtedly the most gratifying feature in these evidences of progress in surgical practice is the contemplation that every advance step means the mitigation of human suffering, the prolongation of life in greater comfort, and the contributing to the sum total of human joy, which after all represent the best rewards and the greatest stimulus to the surgeon for the attainment of the highest possible efficiency in the practice of his chosen profession.

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Hospital Standardization and the Closed Hospital—Since every physician is in favor of anything that will contribute to the better care and treatment of the sick, no argument is necessary to convince the medical profession of the desirability of improving the efficiency of hospital service. The term (standardization of hospitals) is an unfortunate one, since it does not convey in any sense the ends to be accomplished, namely, better care and treatment of the sick. The best criterion of hospital efficiency is the amount of human suffering relieved by the work done in that institution. . . .

Most hospitals are controlled and managed by a board of trustees, and this body is responsible for the policies of the institution. Hospitals are the workshop of physicians; the material worked on is the sick; the output is health. . . . When medical men dominate the policies of the boards of trustees of hospitals, we shall see fewer humiliating instances of medical men selling their soul and body and independence to an institution for the privilege of having their names appear as a member of the staff of the institution.

The closed hospital has come to the front as a result of the propaganda of so-called standardization of hospitals. This sounds much like, and is on a par with, the closed shop of the labor unions. Unless a man is a member of the union, he may not work in a union shop or place.—The American Medical Press.

1922 Death Rate is Higher and Birth Rate Lower—The Department of Commerce announces that provisional mortality figures compiled by the Bureau of the Census for the first quarter of 1922 indicate higher death rates than for the corresponding quarter of 1921. For the States compared the death rate for the first quarter was 13.7 in 1922 against 12.6 for the first quarter of 1921. The highest mortality rate for the quarter is shown for the District of Columbia (17.6) and the lowest for Wyoming (9.6). These early figures forecast for the year 1922 a higher rate for the death registration area than the record low rate (11.7) for the year 1921.

Provisional birth figures compiled by the Bureau of the Census for the first quarter of 1922 indicate lower birth rates than for the corresponding quarter of 1921. For the States compared the total birth rate for the first quarter was 23.3 in 1922 against 25.3 in 1921. The highest birth rate for the quarter (29.2) is shown for North Carolina and the lowest (16.5) for the State of Washington. Higher rates will be necessary for the remaining months of the year if the 1922 rate is to equal the 1921 rate for the birth registration area—24.3.—The Modern Hospital, October, 1922.

THE HEMORRHOID PROBLEM *

A REVIEW

By SOL. HYMAN, M. D., San Francisco

Twenty-five hundred years ago Hippocrates treated piles by cauterization with the hot iron and by ligature, and no advance was made until the introduction of general anesthesia. The ancient methods were then improved, and later Whitehead devised his operation for complete excision of the pile-bearing area, so that today we have the three principal methods of handling piles: ligature, clamp and cautery, and the radical Whitehead procedure.

During the past twenty-five years the fashion with regard to the choice of procedure has changed, but nothing new has been added. At the beginning of this period the German school was dominant, and the clamp and cautery held the field. Then, for a brief period, trained surgeons, seeing the possibilities for a real cure in the excision of the hemorrhoidal plexus, adopted Whitehead's radical operation. But this never could become a general procedure, requiring greater surgical ability than that possessed by the host of practitioners upon whom responsibility for the treatment of piles falls.

Latterly there have come into being specialists for diseases of the rectum and anus, many of whom lack the surgical training necessary for the performance of this often major operation; and practically all of them advocate ligature, either in mass or with dissection of the individual piles, this view being shared by most American surgeons, some reserving the Whitehead operation for the extreme cases with a complete rosette.

Of the three operations at our disposal, which is the best, judged from the standpoints of simplicity, post-operative comfort, and freedom from complications and recurrences?

1. *Simplicity.* The clamp and cautery operation is the simplest, with the ligature method in all of its modifications following as a close second. There is but little to choose between them. Whitehead's procedure, necessitating an accurate dissection and removal of the lower end of the bowel, cannot be reckoned with these from the viewpoint of simplicity.

2. *Post-operative Comfort.* Arthur Neve, in a series of 855 cases, states that, following the ligature operation, many of the patients suffered great pain; following the clamp and cautery operation, practically none. The catheter was used once, on the night of the operation, in about 10 per cent, and subsequently in but two or three of the 855 cases. Anderson reports 300 operations in 18 months from St. Mark's Hospital in London: 150 by ligature, 100 Whitehead, 50 clamp and cautery. Severe post-operative pain was present in none of those operated upon with the clamp and cautery, in 10 per cent of those in which the ligature was used, and in 16 per cent after the Whitehead operation; moderate pain followed these procedures in 30 per cent, 57 per cent and 56 per cent, respectively; and but little pain in 70 per cent, 33 per cent and 28 per cent. The degree of pain was

* Read before the Surgery Section of the State Medical Society Annual Meeting, Yosemite, May, 1922.